5

10

15

20

25

30

35

CLAIMS

- 1. A polymer compound whose side chain has a structure represented by the following Formula (I): $CH_2=C(R^1)COO(R^2O)_PCH_2CH(OH)CH_2OOC$ Formula (I)
- wherein R¹ represents a hydrogen atom or a methyl group, R² has one or more organic residues independently selected from the group consisting of an alkylene group, a branched alkylene group, an alkenylene group, a branched alkenylene group, a cycloalkylene group, a cycloalkenylene group and an arylene group, and n represents an integer of 0 to 1.
- 2. The polymer compound according to claim 1 wherein the polymer compound residue representing the main chain is a copolymer of (meth)acrylic acid and styrene and/or substituted styrene.
- 3. A method of preparing the polymer compound according to claim 1 comprising the following Preparation step A wherein

to a polymer compound represented by the following Formula (2):

 $R^3-(-COOH)_m$ Formula (2)

wherein R³ is a polymer compound residue representing the main chain and m represents an integer of 2 or more is reacted one or more of compounds represented by the following Formula (3):

 $CH_2=C(R^1)COO(R^2O)_nCH_2CHCH_2$

Formula (3)

wherein R^1 represents a hydrogen atom or a methyl group, R^2 has one or more organic residues independently selected from the group consisting of an alkylene group, a branched alkylene group, an alkenylene group, a branched alkenylene group, a cycloalkylene group, a cycloalkenylene group and an arylene group, and n represents an integer of 0 to 1, in an additive reaction.

4. The method of preparation according to claim 3 wherein the addition reaction in the above Preparation

PCT/JP2004/016505

5

10

15

20

25

30

35

step A is carried out in the presence of a catalyst.

- The method of preparation according to claim 4 wherein said catalyst comprises one or more catalysts selected from the group consisting of a metal halide, a tertiary amine, a pyridine compound, a pyridinium salt, a quaternary ammonium salt, a phosphine compound, a phosphonium salt, and an imidazole compound.
- The method of preparation according to claim 5 wherein said catalyst comprises one or more catalysts selected from the group consisting of benzyltrimethyl ammonium chloride, benzyltriethyl ammonium chloride, tetrabutyl ammonium bromide, triphenyl phosphine, ethyltriphenyl phosphonium bromide, tetraphenyl phosphonium bromide, benzyltriphenyl phosphonium chloride, and 2-methyl imidazole.
- A curable composition comprising the polymer 7. compound according to claim 1.
- The curable composition according to claim 7 further comprising an ethylenic unsaturated compound.
- The curable composition according to claim 7 further comprising a radical polymerization initiator.
- The curable composition according to claim 9 wherein said radical polymerization initiator is a photo radical polymerization initiator.
- The curable composition according to claim 9 comprising a polyfunctional thiol compound that has one or more than one mercapto group.
- The curable composition according to claim 11 wherein said polyfunctional thiol is a polyfunctional thiol compound having two or more mercapto-containing groups in which the carbon atom at position α and/or position β relative to the mercapto group has a substituent group.
- 13. A curable composition for color filters which composition comprises a curable composition according to any of claims 7-12.
 - A cured product for color filters having a

WO 2005/047346 PCT/JP2004/016505

5

- 38 -

pattern that is obtained by a process wherein a curable composition according to any of claims 7-12 is coated on a substrate, which is then exposed to light and cured through a photomask, and the uncured portions are washed away with an aqueous alkaline solution.